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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,388	01/30/2001	Shunpei Yamazaki	07977/265001/US4590	3058

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EXAMINER

TRAN, THIEN F

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 10/21/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/774,388

Applicant(s)

YAMAZAKI, SHUNPEI

Examiner

Thien F Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 11-16, 25-36, 38 and 41 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 17, 19, 21-24, 39, 40 and 42-46 is/are rejected.
- 7) ☒ Claim(s) 18, 20 and 37 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-24 in Paper No. 7 is acknowledged.

Also, Applicant's election of embodiment 1 of Fig. 1 with claims 1-10, 17-24, 37, 39-40 and 42-46 readable thereon in Paper No. 9 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The abstract of the disclosure is objected to because the invention is about the device, not the process of making the device. Therefore, the abstract should be directed to the device, its structure and operation. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities:

- on page 7, line 15, "Fig. 4" should read --Figs. 4A-4E--;
- on page 7, line 17, "Fig. 5" should read --Figs. 5A-5D--;
- on page 7, line 19, "Fig. 6" should read --Figs. 6A-6D--;
- on page 7, line 21, "Fig. 7" should read --Figs. 7A-7C--;
- on page 7, line 23, "Fig. 8" should read --Figs. 8A-8C--;

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on page 7, line 25, "Fig. 9" should read --Figs. 9A-9B--;
on page 8, line 2, "Fig. 10" should read --Figs. 10A-10B--;
on page 8, line 10, "Fig. 14" should read --Figs. 14A-14B--;
on page 8, line 11, "Fig. 15" should read --Figs. 15A-15B--;
on page 8, line 13, "Fig. 16" should read --Figs. 16A-16D--;
on page 8, line 15, "Fig. 17" should read --Figs. 17A-17C--;
on page 8, line 17, "Fig. 18" should read --Figs. 18A-18B--;
on page 8, line 23, "Fig. 21" should read --Figs. 21A-21F--;
on page 8, line 24, "Figs. 22" should read --Figs. 22A-22C--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 39, 40 and 42-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 39 recites the limitation "red color filters" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim.

Claims 40 and 42-46 are necessarily rejected since these claims directly or indirectly depend upon the rejected base claims.

Claims 39, 40 and 42-46 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of

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elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the location where the red color filters are formed in the structure.

Claims 40 and 42-46 are necessarily rejected since these claims directly or indirectly depend upon the rejected base claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 17, 22, 23, 39 and 45 are rejected under 35 U.S.C. 102(a) as being anticipated by Hong et al. (reference AZ of record).

Hong et al. discloses the claimed semiconductor device (Fig. 4c) comprising color filters provided on a lower substrate; an organic insulator which is characterized as an adhesive layer for attaching the lower glass substrate to the upper substrate; an insulating film on the adhesive layer; and a plurality of TFTs over the insulating film and the color filters wherein some color filters are red color filters.

Regarding claims 22 and 45, a fixing upper substrate is provided over the TFTs so as to face the lower substrate.

Regarding claim 23, a black mask (black matrix) is formed together with the color filters.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19, 21, 24, 43, 44 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hong et al. (reference AZ of record).

Hong et al. as described above does not explicitly disclose the lower substrate comprising organic material (plastic). However, glass and plastic are materials known in the art and routinely used to form a substrate in a semiconductor device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select either one of these materials as a suitable material for the lower substrate of Hong et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. In re Leshin, 125 USPQ 416.

Regarding claims 21 and 44, the adhesive layer is an organic insulator layer. Hong et al. does not explicitly disclose the adhesive layer comprising polyimide. However, it is known in the art that polyimide is an organic material that is routinely used to form insulator layer in a semiconductor device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select polyimide as a suitable insulating material for the adhesive organic insulator layer of Hong et al., since it has been held to be within the general skill of a worker in the art to

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select a known material on the basis of its suitability for the intended use as a matter of design choice. In re Leshin, 125 USPQ 416.

Regarding claims 24 and 46, Hong et al. does not explicitly disclose the device is a personal computer. However, the recitation "a personal computer" specifies an intended use or field of use is treated as nonlimiting since it has been held that in device claims, intended use must result in a structural difference between the claim invention and the prior art in order to patentably distinguish the claim invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963). A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Furthermore, it is known that a personal computer employs a liquid crystal display. It would have been obvious to use the liquid crystal display of Hong et al. in the personal computer for the advantages that the liquid crystal display of Hong et al. provides as described above.

Allowable Subject Matter

Claims 1-10 are allowed.

Claims 18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Claim 37 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: prior art references do not teach or render obvious a semiconductor device comprising color filters on a substrate; an adhesive layer on the substrate and the color filters; an insulating film on the adhesive layer; a plurality of TFTs over the insulating film and the color filters; and light emitting elements on the TFTs.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thien F Tran whose telephone number is (703) 308-4108. The examiner can normally be reached on 8:00AM - 4:30PM Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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October 18, 2002

A handwritten signature in black ink, appearing to read "Thien Tran", with a stylized flourish at the end.

Thien Tran
Patent Examiner
Technology Center 2800